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Grazing Demand and Insurance Situation

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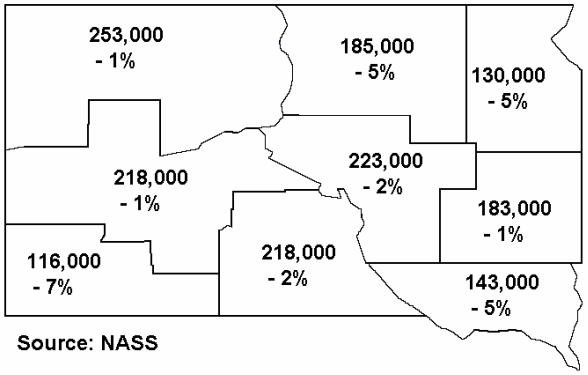
At the start of spring grazing season in South Dakota we thought it would be interesting to look at changes in demand for pasture and the insurance situation. A pilot program for insuring pasture was first offered for the 2007 grazing season. Looking at both pasture and traditional forage production insurance should give some indication of the steps producers have taken to manage risk.

Cow Inventory

The inventory of all cattle in South Dakota at the beginning of 2007 was 3,700,000 head. The total was down 50,000 head from 2006. The beef cow category was responsible for most of the change, being down 52,000 head. Recently the South Dakota Agricultural Statistics Service released county level cattle and cow inventory levels. Counties with the largest absolute declines were Fall River and Clark, down 6,000 and 5,000 cows, respectively. Counties with the largest absolute increases were Sully and McPherson, up 3,000 cows each. The county-level changes likely reflect moisture conditions, but also feeding or wintering capacity.

Looking at cow inventory from a slightly more aggregated perspective, we see there was a decline in beef cow inventory in each district in South Dakota (figure 1). The largest decline, on a percentage basis, was in the Southwest. The Northcentral, Northeast, and Southeast districts also had large percentage declines. The Northcentral district had added a similar percentage of cows a year earlier while the Northeast district has had its second year of large percentage declines. The small changes for the western districts suggest stable demand for pasture except in the Southwest district. The net impact at the state level would be less demand for pastureland from cows.

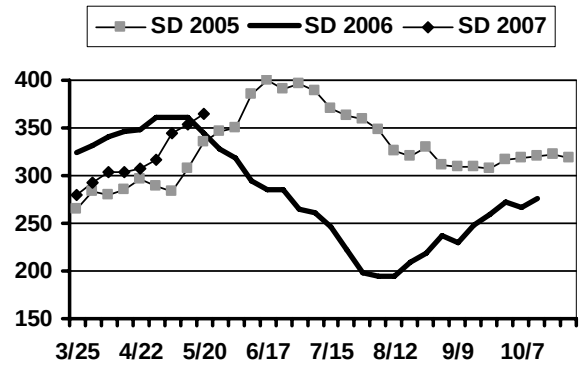
Fig. 1. 2007 Beef Cow Inventory by District and Annual Change



Pasture Conditions

With the recent rains in the west and more than adequate moisture (with some flooding) east of the Missouri River, statewide pasture and range conditions that were below 2006 estimates this spring have finally improved and risen above 2006 estimates by mid May (figure 2). Looking at the early spring period, the worst pasture and range conditions over the last three years were experienced in 2005. 2007 has been below 2006 in all but the May 20th estimate. Summer and fall conditions, however, tell another story. Where 2005 received adequate moisture to improve range conditions, 2006 saw a dramatic drop in conditions resulting in short supplies of grazable forage. This sets up the current situation where 2007 conditions started lower than 2006 and are just beginning to improve. The sustainability of this upward trend will depend upon the amount of precipitation that falls over the next few months.

Fig. 2. Weekly South Dakota Range & Pasture Condition Index



Source: USDA-NASS

One thing to consider, given the significant difference in the amount of precipitation received East and West River this year, is that statewide averages do not reflect where the grass is available. Whereas the statewide conditions have improved this spring due to the more than adequate moisture received East River, drought conditions still persist West River. Many of the early spring storms that western South Dakota depends upon for forage production and water for stock dams has bypassed the region, releasing their moisture to the south and east. Recent rains in West River have missed many areas and not been sufficient to break the drought. The rain that has fallen has soaked into the soil and has not provided sufficient runoff to fill stock dams and ponds and to regenerate creek flows. Rainfall over the next couple of weeks will be very important to the success or failure of grazing enterprises West River this year.

A "FeedFinder" website sponsored by both South Dakota State University and the South Dakota Department of Agriculture can help producers with grass available to match up with those looking for pastures to graze. It can be found online at: http://feedfinder.sdstate.edu:8080/.

Grazing Fees

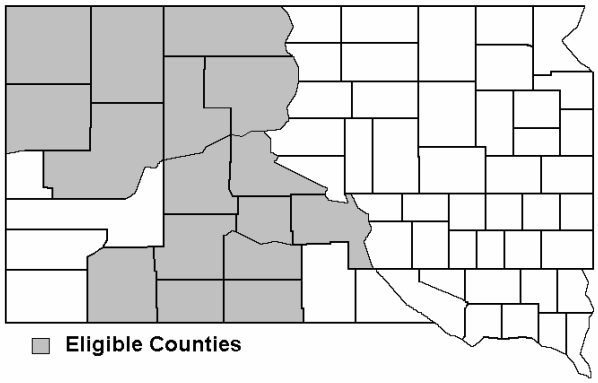
Grazing fees reported by the USDA from their 2007 January Cattle Survey indicate that the average grazing rate per animal unit month is $20.30 in South Dakota. This is a 10.3% increase from 2006. Cow/calf rates increased 9.6% from 2006 to $24.00 per month. The per head rate was reported to be $21.00 per month which increased 7.7% over 2006. The only other state with a higher AUM rate was Nebraska ($24.00/AUM). The average for the nine Great Plains states (CO, KS, NE, NM, ND, OK, SD, TX, & WY) was $13.70 per AUM, which increased 5.4% from 2006.

According to another grazing fee report, issued by the USDA (USDA-WY Dept Ag Market News) which covers Southwestern South Dakota, fees for cow/calf pairs in 2007 were between $20 and $30 per pair per month. This compares with $20 to $25 per pair in 2006. Rates for yearlings were reported to be between $12 and $22 per head per month for 2007 compared to between $12 and $20 in 2006.

Pasture, Rangeland, Forage Insurance

A management strategy producers have adopted in the western districts is pasture insurance. A three year pilot insurance program based on a vegetation index began for the 2007 grazing period for certain counties in western South Dakota (figure 3).

Fig. 3. Counties Eligible for PRF Insurance



Insurance payments to producers are determined through the use of satellite technology. A given region is divided into "index grids." Data from satellite photos are used to develop a level of "greenness" for each individual index grid. Comparisons of current "greenness" levels to historic levels are used to generate a vegetation index for each index grid. If the vegetation index for a given index grid falls below a level set by the program and a producer at signup, then a payment is made to the producer for the forage loss.

Producers purchased insurance on 3 million acres for crop year 2007 with a maximum liability level of $42 million (table 1). Producers paid about $2.2 million in premiums. In 2002, the eligible counties had 14.9 million acres of pastureland and 0.9 million acres for forage in cropland. Thus, for 2007 producers in those counties insured about 19 percent of total pasture and forage. While it is difficult to say what the exact amount of eligible acres would be, the percent insured is much less than the typical amount of cropland insured.

For the 2007 growing season, there is a substantial variability in the amount of acres covered by the PRF Insurance program in the eligible counties (table 1). Several counties have over 30 percent of all pasture and hayland area insured, while others have less than 10 percent covered.

The actual payouts for the first "interval" of 2007 are currently being calculated and no data are available as yet on actual payouts to producers by county.

The program was developed by the USDA Risk Management Agency (RMA) and is available through local crop insurance agents. Producers wanting to take part in the program for the 2008 growing season need to sign up by November 30, 2007. Beutler and Hadrick (2006) has more details on the insurance.

Alfalfa Insurance

Part of the adoption story for PRF can be related to the experience producers have had with other types of hay insurance. The main type of insurance is Forage Production insurance, which requires some portion of the stand contain alfalfa. Diersen (2006) has more details on this particular type of hay insurance.

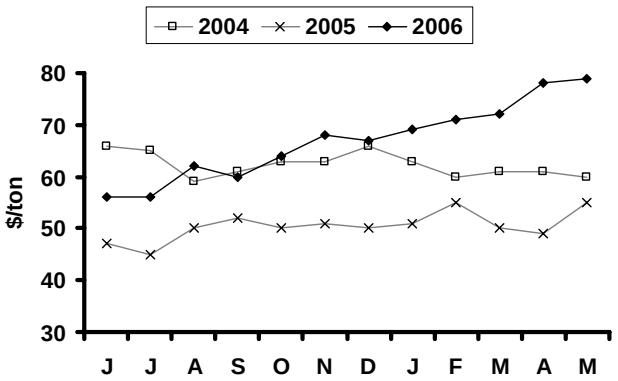
Of concern in 2007 are the high prices for hay at the close of the marketing year. For several months in a row the price for "other hay" in South Dakota has reached monthly record and all-time high levels (figure 4). In May the price was $79 per ton, reflecting poor harvest totals in 2006, tight December 1 stocks, and relatively low acres expected for harvest in 2007. Alfalfa prices were slightly higher in 1997. As stated above, demand may be slightly lower for all feedstuffs as cow numbers are lower. However, the overall decrease in the supply of hay and other feed has resulted in hay prices being higher.

Table 1. Acres Insured under PRF

County	Acres Insured	% of All Pasture & Forage
Bennett	22,473	4
Butte	87,775	8
Corson	348,206	32
Dewey	172,477	15
Haakon	310,877	36
Harding	333,044	22
Jackson	283,682	29
Jones	114,038	32
Lyman	120,416	21
Meade	327,275	17
Mellette	226,626	39
Perkins	289,520	20
Shannon	25,690	2
Stanley	129,858	20
Todd	147,541	17
Ziebach	90,584	9
Total	3,030,082	19

Notes: Insurance statistics are from USDA-Risk Management Agency. The total pasture and forage is from the *2002 Census of Agriculture* county data, adding Pastureland (all types) and Forage.

Fig. 4. South Dakota Other Hay Price



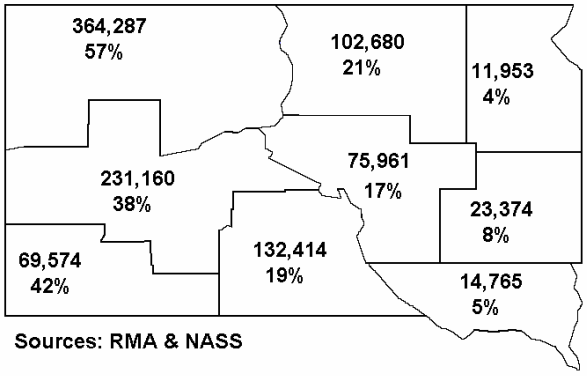
Source: USDA-NASS

Getting back to the insurance situation, producers in the same areas that purchased PRF insurance tend to purchase Forage Production insurance. In 2007 producers across South Dakota insured 1.0 million acres of hay, down from 1.2 million acres insured in 2006. The insured acres represent only about one-fourth of all hay acres in South Dakota.

Demand for the insurance varies across the state. At the district level, usage is the highest in the northwest (figure 5). Both the absolute 364,287 acres insured and the percent of all hay acres were the highest among districts.

Production was down sharply in the northwest and neighboring districts in 2006. Fortunately, producers in those areas covered a similar level of acres as in 2007. For all of 2006, 78 percent of the policies received an indemnity payment. The $32 million in indemnity payments was a record level, and the funds may have partially fueled demand for replacement feed. Thus, the insurance worked even though it probably led to higher hay prices. A more ideal insurance product for a producer of hay for feed would be a revenue product that increases the indemnity when market prices increase.

Fig. 5. 2007 Hay Acres Insured and Percent of Total Hay Acres



Conclusion

While beef cow inventories are lower implying reduced demand for pasture, other factors have changed that resulted in higher price for pasture and other feeds. The quality and quantity of pasture was reduced in the latter part of 2006, with a carryover effect on the supply of pasture available this year. Precipitation will play a big role in the availability of forage especially in the west. Producers do have alternatives available to manage some of the risk from production shortfalls on pasture and forage. The pilot PRF insurance has received interest. Large indemnity payments on Forage Production insurance show the benefit of traditional hay insurance.

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Beutler, M. and Hadrick, S. *Pasture, Rangeland, and Forage Pilot Insurance Program in South Dakota*. ExEx 5059, Cooperative Extension Service, South Dakota State University, 2006.

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USDA-WY Dept Ag Market News, Torrington, WY. Dennis Widga, OIC 307/532-4146 24 HR Markets 307/532-7200. www.ams.usda.gov/mnreports/to_ls150.txt

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